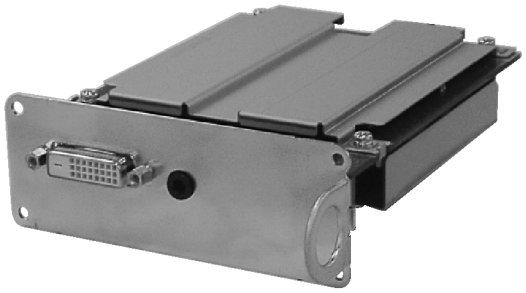
ORDER NO. ITD0804012CE
B34 Canada: D10

Service Manual

DVI-D Terminal Board

Model No. TY-FB11DD
TY-FB11DDC



⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

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1 Safety Precautions

1.1. General Guidelines

1. When conducting repairs and servicing, do not attempt to modify the equipment, its parts or its materials.
2. When wiring units (with cables, flexible cables or lead wires) are supplied as repair parts and only one wire or some of the wires have been broken or disconnected, do not attempt to repair or re-wire the units. Replace the entire wiring unit instead.
3. When conducting repairs and servicing, do not twist the Faston connectors but plug them straight in or unplug them straight out.
4. When servicing, observe the original lead dress. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
5. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers shields are properly installed.
6. After servicing, make the following leakage current checks to prevent the customer from being exposed to shock hazards.

1.1.1. Leakage Current Cold Check

1. Unplug the AC cord and connect a jumper between the two prongs on the plug.
2. Measure the resistance value, with an ohmmeter, between the jumpered AC plug and each exposed metallic cabinet part on the equipment such as screwheads, connectors, control shafts, etc. When the exposed metallic part has a return path to the chassis, the reading should be between 1Mohm and 5.2Mohm.
   When the exposed metal does not have a return path to the chassis, the reading must be ∞.

1.1.2. Leakage Current Hot Check (See Figure 1.)

1. Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.
2. Connect a 1.5kohm, 10 watts resistor, in parallel with a 0.15µF capacitors, between each exposed metallic part on the set and a good earth ground such as a water pipe, as shown in Figure 1.
3. Use an AC voltmeter, with 1000 ohms/volt or more sensitivity, to measure the potential across the resistor.
4. Check each exposed metallic part, and measure the voltage at each point.
5. Reverse the AC plug in the AC outlet and repeat each of the above measurements.
6. The potential at any point should not exceed 0.75 volts RMS. A leakage current tester (Simpson Model 229 or equivalent) may be used to make the hot checks, leakage current must not exceed 1/2 milliamp. In case a measurement is outside of the limits specified, there is a possibility of a shock hazard, and the equipment should be repaired and rechecked before it is returned to the customer.

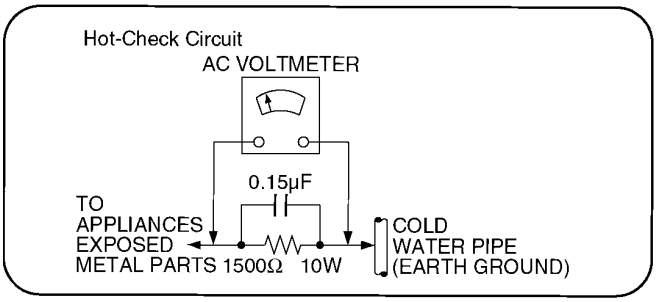


Figure 1

2 Warning

2.1. Prevention of Electrostatic Discharge (ESD) to Electrostatically Sensitive (ES) Devices

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor [chip] components. The following techniques should be used to help reduce the incidence of component damage caused by electrostatic discharge (ESD).

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any ESD on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging ESD wrist strap, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static solder removal device. Some solder removal devices not classified as [anti-static (ESD protected)] can generate electrical charge sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material).
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.
   Caution
   Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.
8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise ham less motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity (ESD) sufficient to damage an ES device).

IMPORTANT SAFETY NOTICE

There are special components used in this equipment which are important for safety.
These parts are marked by ⚠ in the schematic diagrams, Exploded Views and replacement parts list. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent shock, fire, or other hazards. Do not modify the original design without permission of manufacturer.

2.2. About lead free solder (PbF)

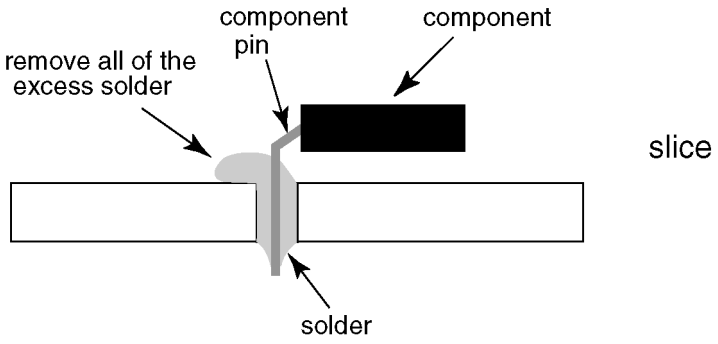
Note: Lead is listed as (Pb) in the periodic table of elements.
In the information below, Pb will refer to Lead solder, and PbF will refer to Lead Free Solder.
The Lead Free Solder used in our manufacturing process and discussed below is (Sn+Ag+Cu).
That is Tin (Sn), Silver (Ag) and Copper (Cu) although other types are available.

This model uses Pb Free solder in it's manufacture due to environmental conservation issues. For service and repair work, we'd suggest the use of Pb free solder as well, although Pb solder may be used.

PCBs manufactured using lead free solder will have the PbF within a leaf Symbol **PbF** stamped on the back of PCB.

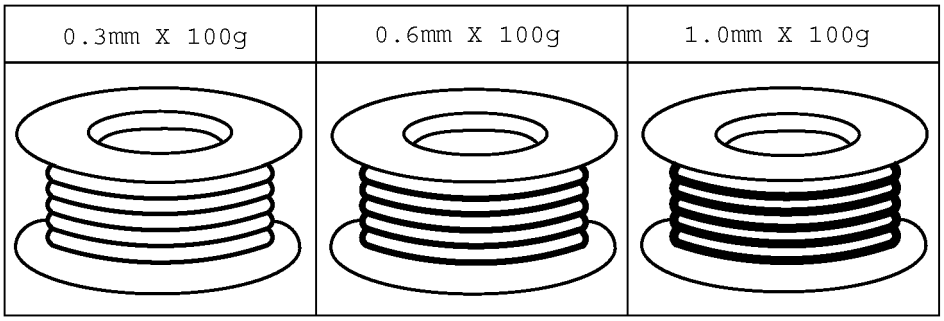
Caution

- Pb free solder has a higher melting point than standard solder. Typically the melting point is 50 ~ 70 °F (30~40 °C) higher. Please use a high temperature soldering iron and set it to 700 ± 20 °F (370 ± 10 °C).
- Pb free solder will tend to splash when heated too high (about 1100 °F or 600 °C).
  If you must use Pb solder, please completely remove all of the Pb free solder on the pins or solder area before applying Pb solder. If this is not practical, be sure to heat the Pb free solder until it melts, before applying Pb solder.
- After applying PbF solder to double layered boards, please check the component side for excess solder which may flow onto the opposite side. (see figure below)



Suggested Pb free solder

There are several kinds of Pb free solder available for purchase. This product uses Sn+Ag+Cu (tin, silver, copper) solder. However, Sn+Cu (tin, copper), Sn+Zn+Bi (tin, zinc, bismuth) solder can also be used.



3 Specifications

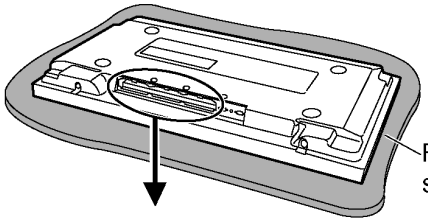
Terminals	Video Input	DVI-D 24 Pin × 1 compliance with DVI Revision 1.0
	Audio Input	Stereo mini jack (M3) × 1 0.5 Vrms
Content Protection	Compatible with HDCP 1.1	

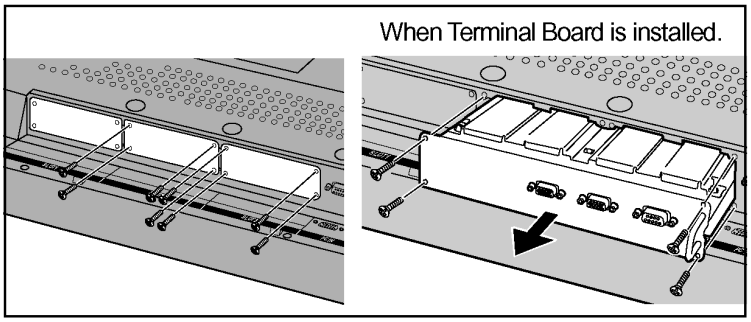
4 Installation Instructions

The following explanation uses the 42/50-inch plasma display as an example. The terminal board shown is a typical example of one that can be replaced.

- Before proceeding with the replacement steps, be sure to turn off the entire system including the display, unplug all components from their outlets, and disconnect all the interconnect cables from the display.

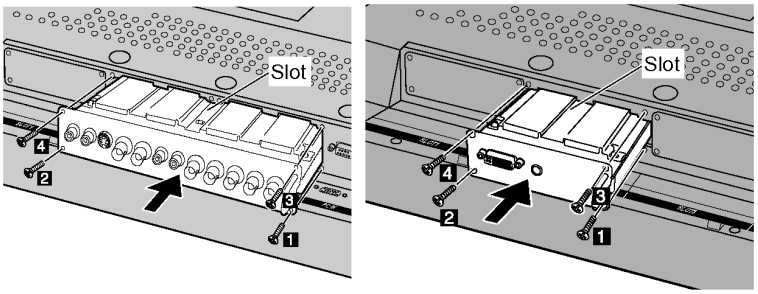
The following example shows installation of a dual slot size board and a single slot size board.





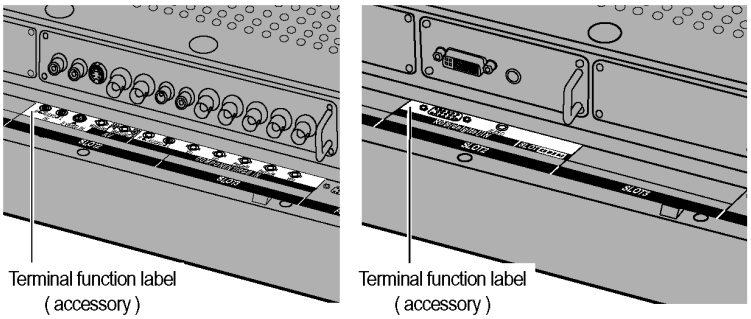
1. Removing the dummy cover or mounted terminal board from display:

- Remove the slot cover securing screws (4 or 8 screws) on the back of the display. If a terminal board is already installed, grip the handle of the terminal board, and slowly pull out in the direction of the arrow.



2. Installing desired Terminal Board:

1. Insert the desired Terminal Board into the slot until it is firmly plugged into the card connector.
   - Make sure that the Board does not ride on the two lower claws.
2. Secure using the previously removed screws or those supplied with the unit. Tighten screws in the numbered order **1** - **4** .
   Please note that there are slot fastening screws at 4 points on each slot (at 2 locations on both the left and right edges), so the number of fastening screws will vary depending on the number of slot insertions. Be sure to fasten all screws tightly.



3. Applying the terminal function label:

Peel off the backing sheet from the terminal function label (accessory) and affix it over the existing label.

- Make sure that the label is affixed with the correct position.

Have the customer keep the removed Terminal Board for future servicing needs.

5 Operating Instructions

Safety Precautions (be sure to observe)

WARNING

- **Never attempt to disassemble or modify this product.**
  To avoid fire, shock, or failure.
- **If you sense smoke, an odd odor, or unusual noises while in operation, immediately unplug the display.**
  Switch off the display and unplug the power cord plug from the supply outlet.
  To avoid fire or shock, do not leave the power of the display turned on.
- **To avoid shock or other problems, do not leave the power cord plug plugged into the supply outlet.**

- **Please contact our designated service department for installation or change of this Product.**
  To Service personnel:
  Before removing or installing the Terminal Board, be sure to turn power of the display off and unplug the power cord plug from the supply outlet.

Handling Cautions

- **Do not touch connector contacts with hands directly.**
  To avoid electrostatic damage to internal parts, before handling this product touch a large metallic object such as a steel cabinet to discharge yourself.
- **Be sure to use the supplied cable or specified parts for interconnection.**
  To avoid malfunction or failure, do not use parts other than those recommended.

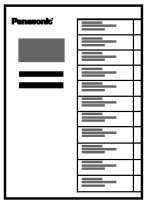
Accessories

Check to make sure that the following accessories are included in the Terminal board package:

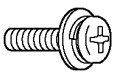
☐ Terminal indicator label (x1)

(Affix this label to the applicable slot of the rear panel of the display.)

☐ Terminal Board Replacement Instructions



☐ Screw x 4

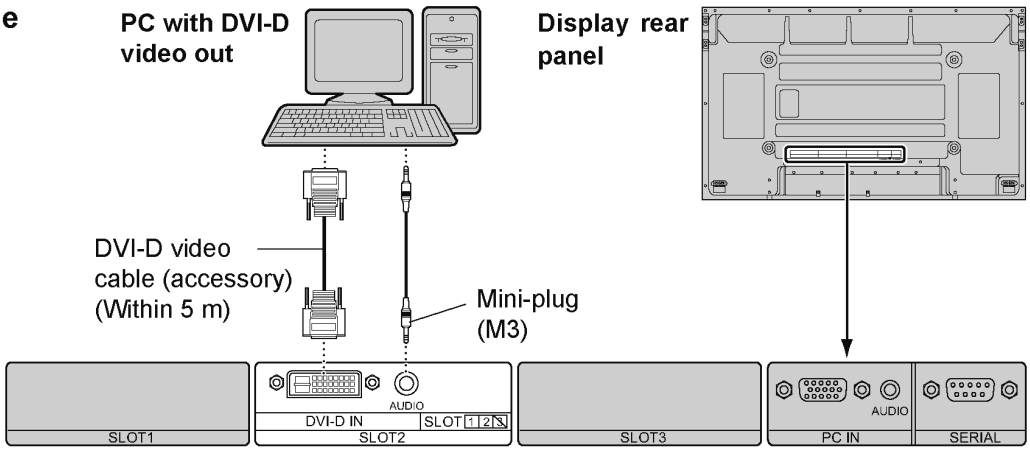


Slot numbers of the display unit that are compatible with terminal board attachments.

Slot1, Slot2 (Slot3 is not compatible)

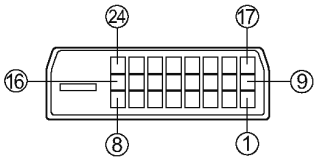
Connections

■Setup Example



Note: Use the DVI-D cable complying with the DVI standard. Image deterioration may occur depending on the length or the quality of the cable.

DVI-D Input Connector Pin Layouts



Connection port view

Pin No.	Signal Name	Pin No.	Signal Name	Pin No.	Signal Name
①	T.M.D.S. data 2-	⑨	T.M.D.S. data 1-	⑰	T.M.D.S. data 0-
②	T.M.D.S. data 2+	⑩	T.M.D.S. data 1+	⑱	T.M.D.S. data 0+
③	T.M.D.S. data 2 shield	⑪	T.M.D.S. data 1 shield	⑲	T.M.D.S. data 0 shield
④	————	⑫	————	⑳	————
⑤	————	⑬	————	㉑	————
⑥	DDC clock	⑭	+5 V DC	㉒	T.M.D.S. clock shield
⑦	DDC data	⑮	Ground	㉓	T.M.D.S. clock+
⑧	————	⑯	Hot plug detect	㉔	T.M.D.S. clock-

Applicable input signals

Signal name	Resolution	Dot clock frequency (MHz)	Horizontal frequency (kHz)	Vertical frequency (Hz)
525 (480) /60p	720 x 480	27.00	31.47	59.94
625 (576) /50p	720 x 576	27.00	31.25	50.00
750 (720) /60p	1,280 x 720	74.25	45.00	60.00
750 (720) /50p	1,280 x 720	74.25	37.50	50.00
1,125 (1,080) /60i	1,920 x 1,080	74.25	33.75	60.00
1,125 (1,080) /60p	1,920 x 1,080	148.50	67.50	60.00
1,125 (1,080) /50i	1,920 x 1,080	74.25	28.13	50.00
1,125 (1,080) /50p	1,920 x 1,080	148.50	56.26	50.00
1,125 (1,080) /30p	1,920 x 1,080	74.25	33.75	30.00
1,125 (1,080) /25p	1,920 x 1,080	74.25	28.13	25.00
1,125 (1,080) /24p	1,920 x 1,080	74.25	27.00	24.00
VGA60	640 x 480	25.18	31.47	59.94
WVGA60	852 x 480	34.24	31.47	59.94
SVGA60	800 x 600	40.00	37.88	60.32
WSVGA60	1,066 x 600	53.00	37.64	59.94
XGA60	1,024 x 768	65.00	48.36	60.00
XGA50	1,024 x 768	51.89	39.55	50.00
WXGA60	1,366 x 768	87.44	48.36	60.00
WXGA50	1,366 x 768	69.92	39.55	50.00
XGA+	1,152 x 864	81.62	53.70	60.00
SXGA60	1,280 x 1,024	108.00	63.98	60.02
SXGA+	1,400 x 1,050	122.61	65.22	60.00
UXGA60	1,600 x 1,200	162.00	75.00	60.00
WUXGA60	1,920 x 1,200	154.00	74.04	59.95

6 Service Fixture & Tools

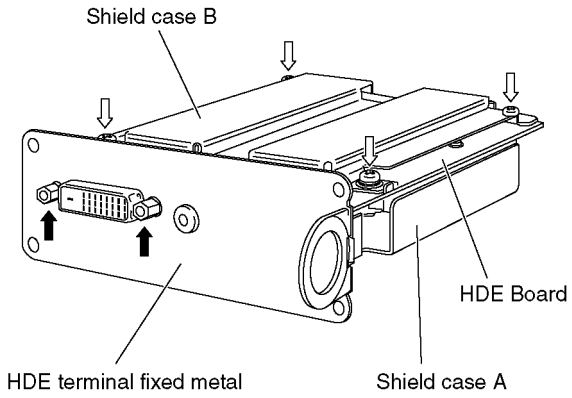
Note:

Extension cable kit for Slot Board is supplied as service fixtures and tools.
(Part No. TZSC07040)

7 Disassembly and Assembly Instructions

7.1. Remove the HDE Board

1. Remove the screws (×2 ➡) and then remove the HDE terminal fixed metal.
2. Remove the screws(×4 ⇨) and then remove the Shield case A/B and HDE Board.

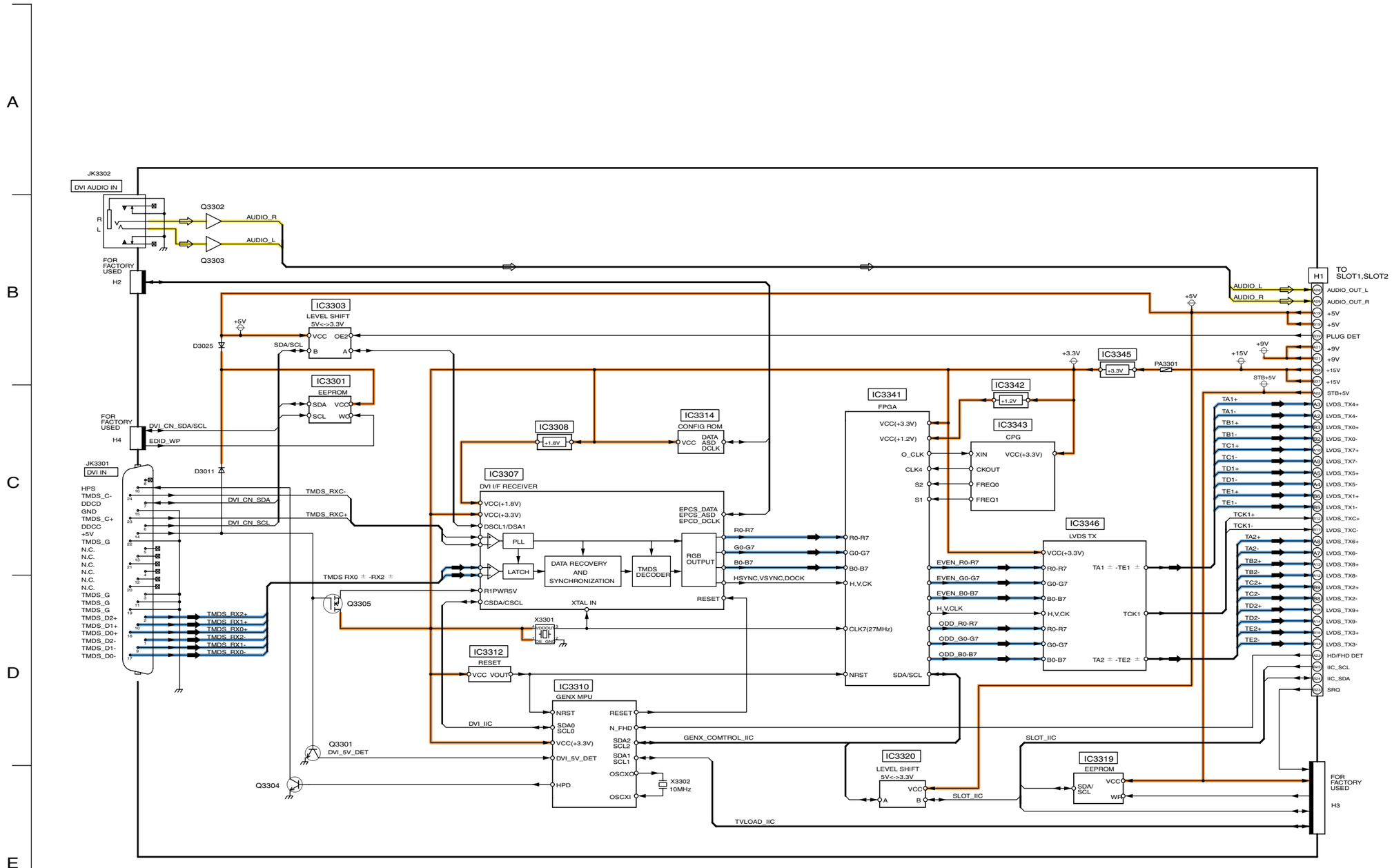


THEA068N : ➡

THEL027N : ⇨

8 Block Diagram

8.1. HDE-Board Block Diagram



TY-FB11DD/C
HDE-Board Block Diagram

TY-FB11DD/C
HDE-Board Block Diagram

9 Schematic Diagram

9.1. Schematic Diagram Note

Important Safety Notice

Components identified by ⚠ mark have special characteristics important for safety.
When replacing any of these components, use only manufacture's specified parts.

Notes:

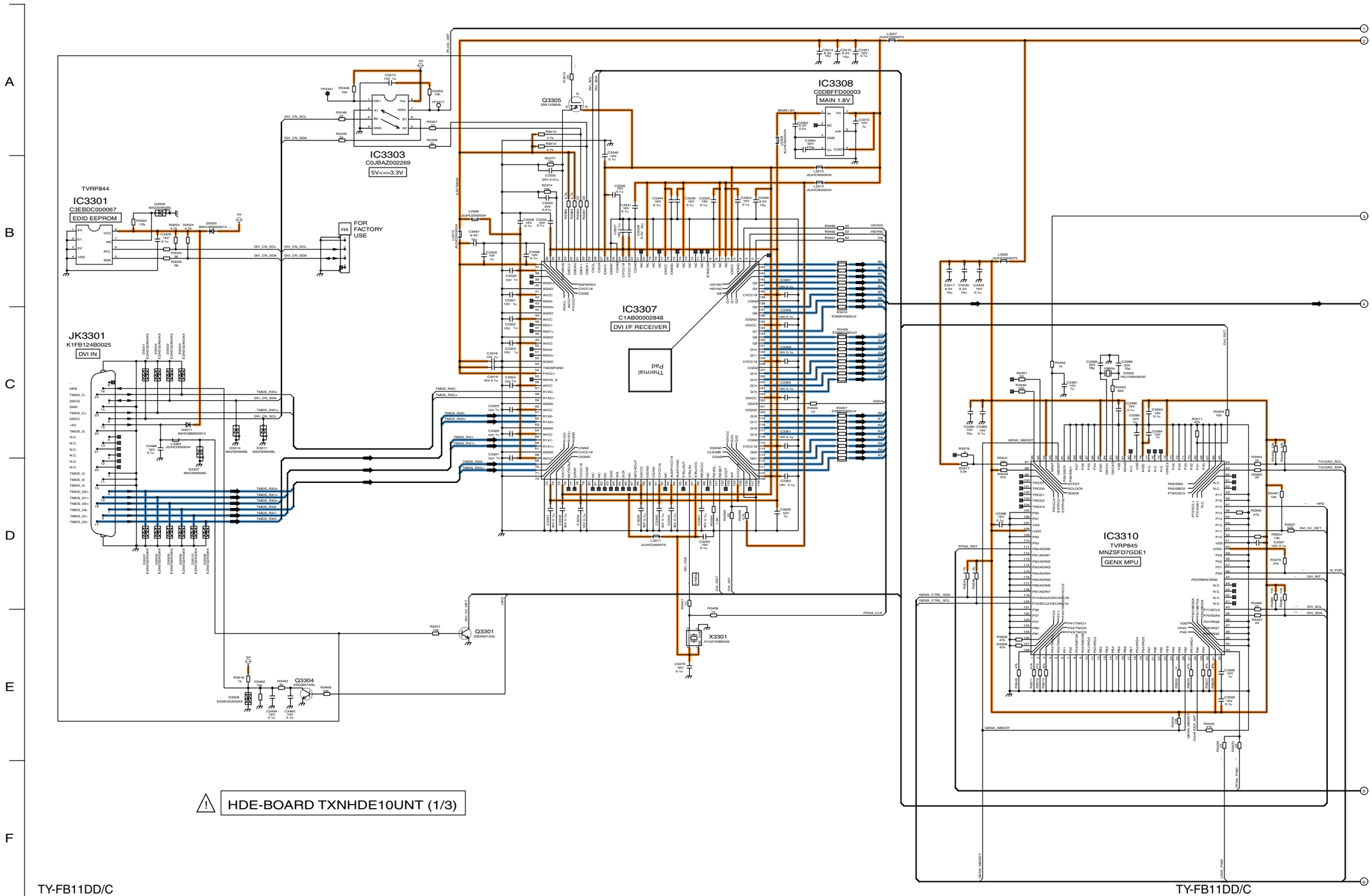
1. **Resistor**
   Unit of resistance is OHM [Ω] (K=1,000, M=1,000,000).
2. **Capacitor**
   Unit of capacitance is μF, unless otherwise noted.
3. Coil
   Unit of inductance is H, unless otherwise noted.
4. Test Point
   ⚲ : Test Point position
5. Earth Symbol
   ⏚ : Chassis Earth (Cold) ⏚ : Line Earth (Hot)
6. Voltage Measurement
   Voltage is measured by a DC voltmeter.
   Conditions of the measurement are the following:
   Receiving Signal ..... Colour Bar signal (RF)
   All customer's controls ..... Maximum positions
7. When arrow mark (↗) is found, connection is easily found from the direction of arrow.
8. Indicates the major signal flow. : Video ➡ Audio ⇨
9. This schematic diagram is the latest at the time of printing and subject to change without notice.

Remarks:

1. The Power Circuit contains a circuit area which uses a separate power supply to isolate the earth connection.
   The circuit is defined by HOT and COLD indications in the schematic diagram. Take the follwing precautions.
   All circuits, except the Power Circuit, are cold.
   Precautions
   a. Do not touch the hot part or the hot and cold parts at the same time or you may be shocked.
   b. Do not short- circuit the hot and cold circuits or a fuse may blow and parts may break.
   c. Do not connect an instrument, such as an oscilloscope, to the hot and cold circuits simultaneously or a fuse may blow.
   Connect the earth of instruments to the earth connection of the circuit being measured.
   d. Make sure to disconnect the power plug before removing the chassis.

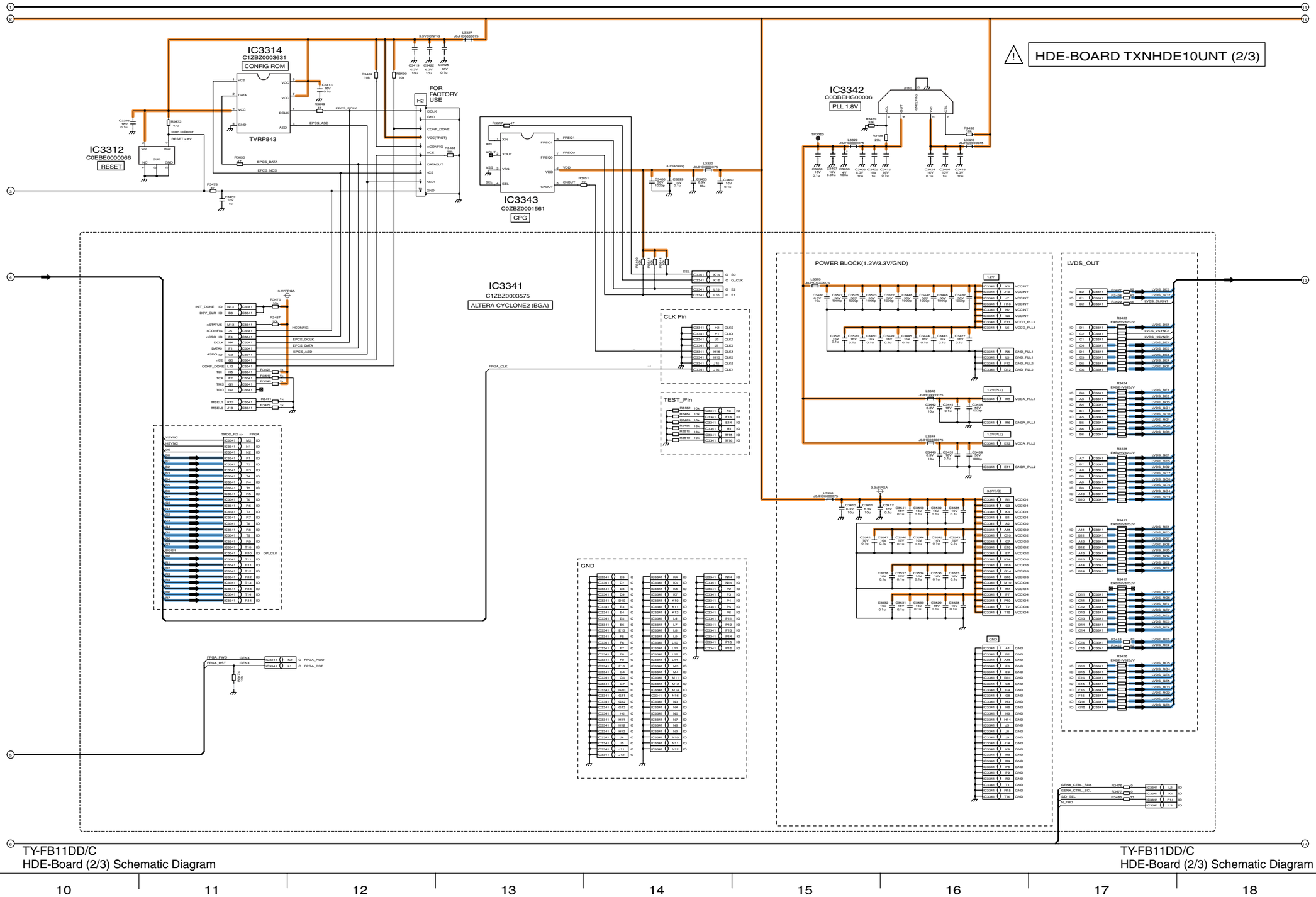
TY-FB11DD/C
Schematic Diagram Notes

9.2. HDE-Board (1/3) Schematic Diagram

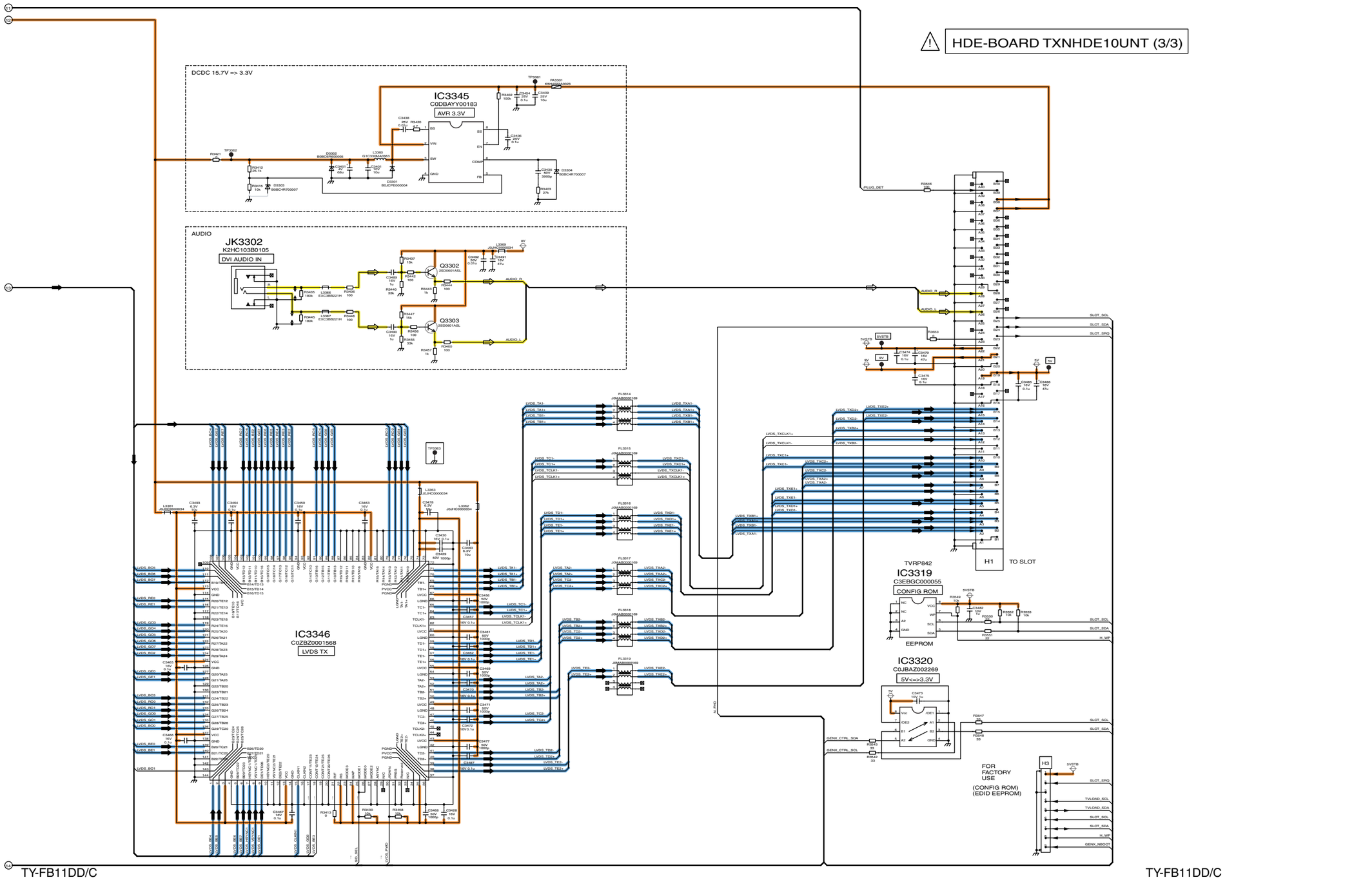


TY-FB11DD/C
HDE-Board (1/3) Schematic Diagram

9.3. HDE-Board (2/3) Schematic Diagram



9.4. HDE-Board (3/3) Schematic Diagram



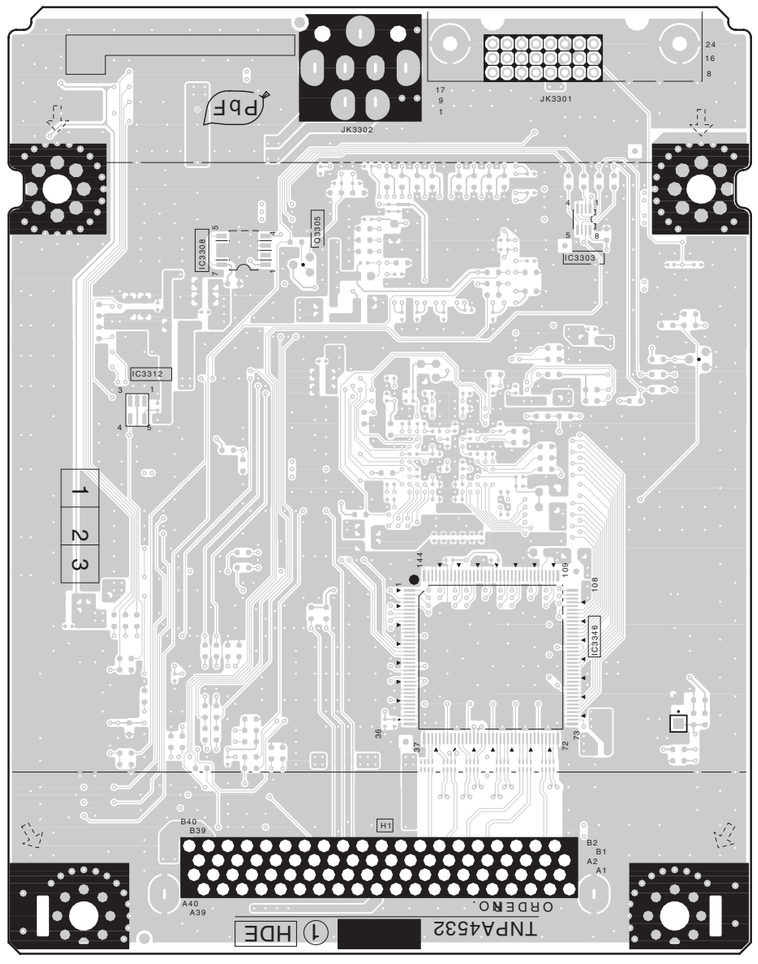
10 Printed Circuit Board

10.1. HDE-Board

Parts Location

HDE-BOARD (FOIL SIDE)			
IC		TRANSISTOR	
IC3303	D-4	Q3305	B-4
IC3308	B-4		
IC3312	B-3		
IC3346	C-2		

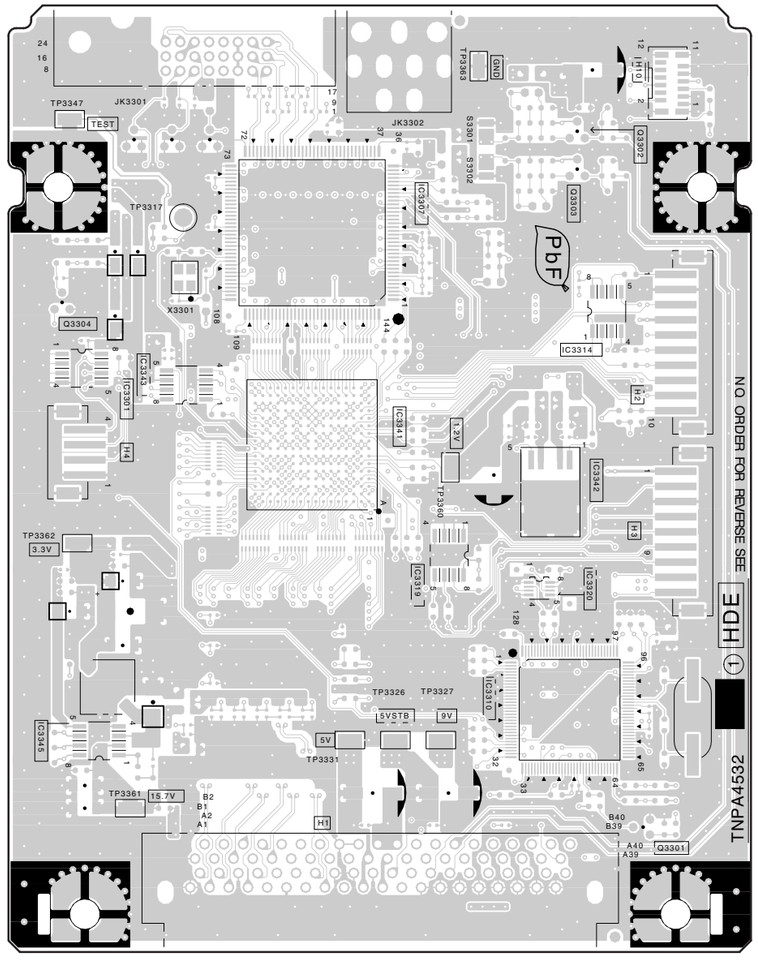
HDE-BOARD (FOIL SIDE)
TXNHDE10UNT



Parts Location

HDE-BOARD (COMPONENT SIDE)					
IC		TRANSISTOR		TEST POINT	
IC3301	F-3	Q3301	H-1	TP3317	F-4
IC3307	G-4	Q3302	H-4	TP3326	G-2
IC3310	G-2	Q3303	H-4	TP3327	G-2
IC3314	H-4	Q3304	F-4	TP3331	G-2
IC3319	G-2			TP3347	F-4
IC3320	H-2			TP3360	G-3
IC3341	G-3			TP3361	F-2
IC3342	H-3			TP3362	F-3
IC3343	F-3			TP3363	G-5
IC3345	E-2				

HDE-BOARD (COMPONENT SIDE)
TXNHDE10UNT



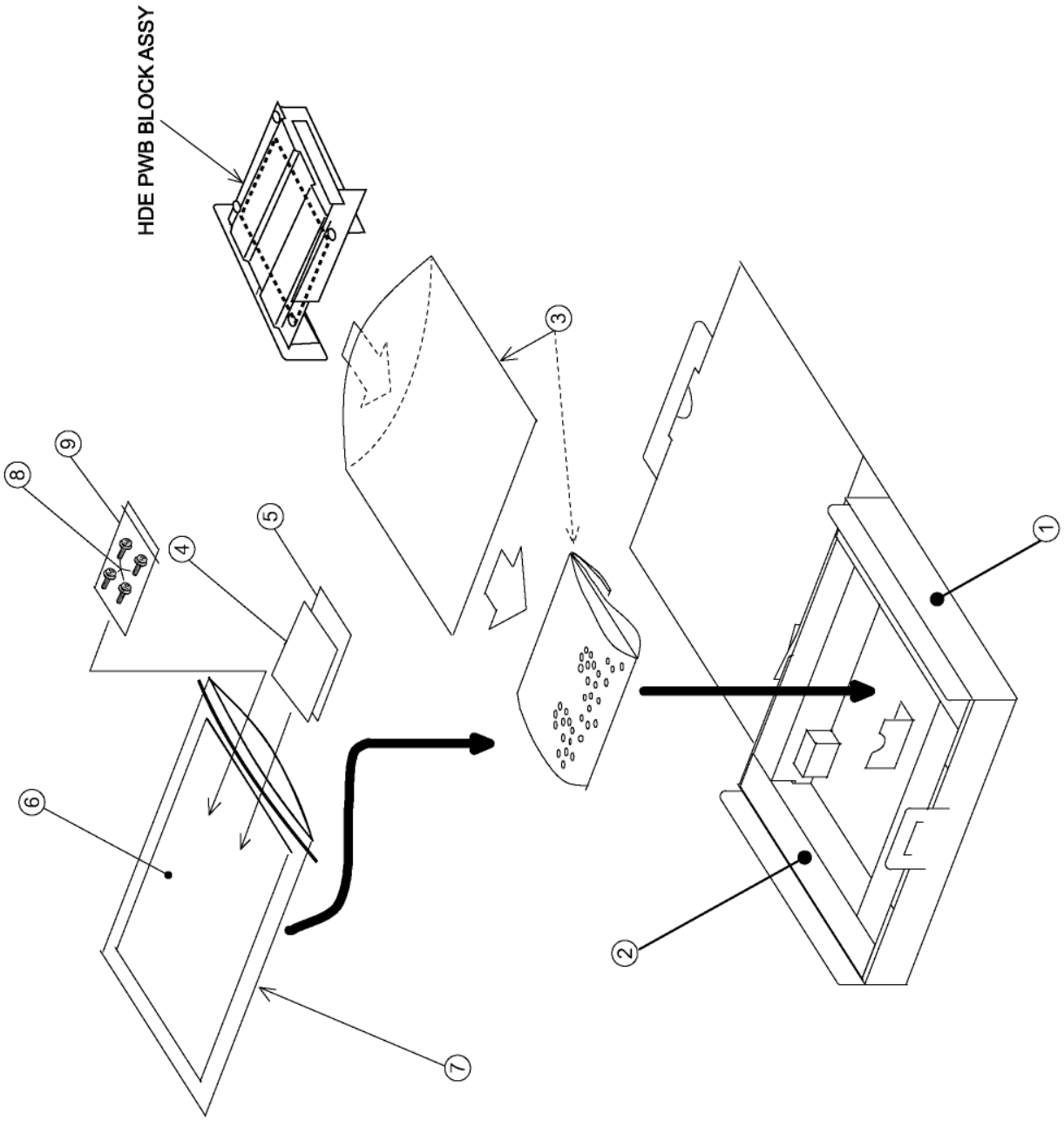
TY-FB11DD/C
HDE-BOARD TXNHDE10UNT

TY-FB11DD/C
HDE-BOARD TXNHDE10UNT

11 Exploded View and Replacement Parts List

11.1. Exploded View and Mechanical Replacement Parts List

11.1.1. Exploded View



11.1.2. Mechanical Replacement Parts List

Note: Important Safety Notice

Components identified by ⚠ mark have special characteristics **important for safety**.

When replacing any of these components, use only manufacturer's specified parts.

Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
		THEA068N	SCREW	2	
		THEL027N	SCREW	4	
⚠	1	TPCB13167	CARTON BOX	1	TY-FB11DD
⚠	1	TPCB13168	CARTON BOX	1	TY-FB11DDC
	2	TPDF1103	CUSHION	1	
	3	TPEH135	PROTECT COVER	1	
	4	TBMU700	TERMINAL SHEET	1	TY-FB11DD
	4	TBMU786	TERMINAL SHEET	1	TY-FB11DDC
	5	TQZH461-1	INSTRUCTION SHEET (SLOT)	1	TY-FB11DD
	5	TQZH886	INSTRUCTION SHEET (SLOT)	1	TY-FB11DDC
⚠	6	TQZH988	INSTRUCTION SHEET	1	TY-FB11DD
⚠	6	TQZH989	INSTRUCTION SHEET	1	TY-FB11DDC
	7	XZBT6506	POLY BAG	1	
	8	THEL0239	SCREW	4	
	9	TQE6691	POLY BAG	1	

11.2. Electrical Replacement Parts List

11.2.1. Replacement Parts List Notes

Important Safety Notice

Components identified by ⚠ mark have special characteristics important for safety.
When replacing any of these components, use only manufacturer's specified parts.

RTL (Retention Time Limited)

Note: The marking (RTL) indicates that the Retention Time is Limited for this item. After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time. The retention period of availability is dependant on the type of assembly, and in accordance with the laws governing part and product retention. After the end of this period, the assembly will no longer be available.

Abbreviation of part name and description

1. Resistor

Example:

ERD25TJ104 C 100KOHM, J, 1/4W

Type Allowance

2. Capacitor

Example:

ECKF1H103ZF C 0.01UF, Z, 50V

Type Allowance

Type	Allowance
C : Carbon	F : ±1%
F : Fuse	G : ±2%
M : Metal Oxide	J : ±5%
Metal FIlm	K : ±10%
S : Solid	M : ±20%
W : Wire Wound	

Type	Allowance
C : Ceramic	C : ±0.25pF
E : Electrolytic	D : ±0.5pF
P : Polyester	F : ±1pF
Polyprop	G : ±3pF
lene	J : ±5pF
T : Tantalum	K : ±10pF
	L : ±15pF
	M : ±20pF
	P : +100%, -0%
	Z : +80%, -20%

11.2.2. Electrical Replacement Parts List

Safety	Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
	C3313	F1H1A1050032	C 10UF, 50V	1	
	C3318	F1H1A1050032	C 10UF, 50V	1	
	C3319	F1G1C104A077	C 0.10UF, K, 16V	1	
	C3320-27	F1H1A1050032	C 10UF, 50V	8	
	C3328	F1G1C104A077	C 0.10UF, K, 16V	1	
	C3329	F1H1A1050032	C 10UF, 50V	1	
	C3330-32	F1G1C104A077	C 0.10UF, K, 16V	3	
	C3333	F1G1E1030005	C 0.01UF, Z, 25V	1	
	C3334	F1G1C104A077	C 0.10UF, K, 16V	1	
	C3335	F1G1E1030005	C 0.01UF, Z, 25V	1	
	C3336,37	F1G1C104A077	C 0.10UF, K, 16V	2	
	C3338	F1J0J1060004	C 0.010UF, K, 16V	1	
	C3339-42	F1G1C104A077	C 0.10UF, K, 16V	4	
	C3344-46	F1G1C104A077	C 0.10UF, K, 16V	3	
	C3349	F1G1C104A077	C 0.10UF, K, 16V	1	
	C3351	F1G1C104A077	C 0.10UF, K, 16V	1	
	C3353,54	F1G1C104A077	C 0.10UF, K, 16V	2	
	C3355	F1J0J1060004	C 0.010UF, K, 16V	1	
	C3356	F1H1A1050032	C 10UF, 50V	1	
	C3357-62	F1G1C104A077	C 0.10UF, K, 16V	6	
	C3363	F1H0J2250008	C 2.2UF, K, 16V	1	
	C3364	F1H1H471A792	C 470UF, 50V	1	
	C3372	F1H1A1050032	C 10UF, 50V	1	
	C3384	F1J1A106A043	C 0.010UF, K, 10V	1	
	C3385,86	F1G1C104A077	C 0.10UF, K, 16V	2	
	C3387	F1H1A1050032	C 10UF, 50V	1	
	C3388	ECJ1VC1H180J	C 18PF, J, 50V	1	
	C3389	ECJ1VC1H150J	C 15PF, J, 50V	1	
	C3390	F1G1C104A077	C 0.10UF, K, 16V	1	
	C3392	F1H1A1050032	C 10UF, 50V	1	
	C3393	F1G1C104A077	C 0.10UF, K, 16V	1	
	C3394,95	F1H1A1050032	C 10UF, 50V	2	
	C3396-99	F1G1C104A077	C 0.10UF, K, 16V	4	
	C3400	F1G1H1020008	C 1000UF, 50V	1	
	C3401	ECJ3YB1A106M	C 10UF, M,6.3V	1	
	C3402	F1H1A1050032	C 10UF, 50V	1	
	C3403	F1J0J1060004	C 0.010UF, K, 16V	1	
	C3404,05	F1H1A1050032	C 10UF, 50V	2	
	C3406	F2G0G101A007	E 100UF 6.3V	1	
	C3407	F1G1C1030008	C 0.010UF, K, 16V	1	
	C3408	F1G1C104A077	C 0.10UF, K, 16V	1	
	C3409	ECJ3YB1E106M	C 10 UF, K, 25V	1	
	C3410,11	F1J0J1060004	C 0.010UF, K, 16V	2	
	C3412,13	F1G1C104A077	C 0.10UF, K, 16V	2	
	C3414	F1J0J1060004	C 0.010UF, K, 16V	1	
	C3415	F1G1C104A077	C 0.10UF, K, 16V	1	
	C3416-20	F1J0J1060004	C 0.010UF, K, 16V	5	
	C3421	F1G1C104A077	C 0.10UF, K, 16V	1	
	C3422	F1J0J1060004	C 0.010UF, K, 16V	1	
	C3423-28	F1G1C104A077	C 0.10UF, K, 16V	6	
	C3429	F1G1H1020008	C 1000UF, 50V	1	
	C3430,31	F1G1C104A077	C 0.10UF, K, 16V	2	
	C3432	F1G1H1020008	C 1000UF, 50V	1	
	C3434	F1G1H1020008	C 1000UF, 50V	1	
	C3435	F1H1H392A970	C 3900PF, K, 50V	1	
	C3436	F1H1E104A129	C 0.1UF, 25V	1	
	C3438	F1G1E103A123	C 0.010UF, K, 16V	1	
	C3439	F1G1H1020008	C 1000UF, 50V	1	
	C3440	F1J0J1060004	C 0.010UF, K, 16V	1	
	C3441	F1G1C104A077	C 0.10UF, K, 16V	1	

Safety	Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
	C3442	F1J0J1060004	C 0.010UF, K, 16V	1	
	C3443-45	F1G1C104A077	C 0.10UF, K, 16V	3	
	C3446-48	F1G1H1020008	C 1000UF, 50V	3	
	C3449,50	F1G1C104A077	C 0.10UF, K, 16V	2	
	C3451	ECGRL0G680ER	C 68PF, J, 4V	1	
	C3454	F1H1E104A129	C 0.1UF, 25V	1	
	C3455	F1J0J1060004	C 0.010UF, K, 16V	1	
	C3456	F1G1H1020008	C 1000UF, 50V	1	
	C3457	F1G1C104A077	C 0.10UF, K, 16V	1	
	C3459,60	F1G1C104A077	C 0.10UF, K, 16V	2	
	C3461	F1G1H1020008	C 1000UF, 50V	1	
	C3462-67	F1G1C104A077	C 0.10UF, K, 16V	6	
	C3468,69	F1G1H1020008	C 1000UF, 50V	2	
	C3470	F1G1C104A077	C 0.10UF, K, 16V	1	
	C3471	F1G1H1020008	C 1000UF, 50V	1	
	C3472	F1G1C104A077	C 0.10UF, K, 16V	1	
	C3473	F1H1A1050032	C 10UF, 50V	1	
	C3474-76	F1G1C104A077	C 0.10UF, K, 16V	3	
	C3477	F1G1H1020008	C 1000UF, 50V	1	
	C3478	F1J0J1060004	C 0.010UF, K, 16V	1	
	C3479	F2G1C470A022	E 47UF, 16V	1	
	C3480	F1J0J1060004	C 0.010UF, K, 16V	1	
	C3482	F1H1A1050032	C 10UF, 50V	1	
	C3483	F1J0J1060004	C 0.010UF, K, 16V	1	
	C3485	F1G1C104A077	C 0.10UF, K, 16V	1	
	C3486	F2G1C470A022	E 47UF, 16V	1	
	C3487,88	F1G1C104A077	C 0.10UF, K, 16V	2	
	C3489,90	ECJ2XF1C105Z	C 1.0UF, Z, 16V	2	
	C3491	F2G1C470A022	E 47UF, 16V	1	
	C3492	ECJ1VF1H103Z	C 0.010UF, Z, 50V	1	
	C3493	F1J0J1060004	C 0.010UF, K, 16V	1	
	C3494,95	F1G1C104A077	C 0.10UF, K, 16V	2	
	C3497	F1J0J1060004	C 0.010UF, K, 16V	1	
	C3498	F1G1C104A077	C 0.10UF, K, 16V	1	
	C3520,21	F1G1C104A077	C 0.10UF, K, 16V	2	
	C3522,23	F1G1H1020008	C 1000UF, 50V	2	
	C3526,27	F1G1H1020008	C 1000UF, 50V	2	
	C3528-47	F1G1C104A077	C 0.10UF, K, 16V	20	
	D3001-10	EZAEG2A50AX	DIODE	10	
	D3011	B0HCMM000014	DIODE	1	
	D3025	B0HCMM000014	DIODE	1	
	D3301	B0JCPE000004	DIODE	1	
	D3302	B0BC6R600005	ZENER DIODE	1	
	D3303,04	B0BC4R700007	ZENER DIODE	2	
	D3307	MA3056MTX	ZENER DIODE	1	
	D3308	EZAEG2A50AX	DIODE	1	
	D3309-11	MA3056MTX	ZENER DIODE	3	
	FL3314-19	J0MAB0000169	LC FILTER	6	
	H1	K1KA80B00037	80P CONNECTOR	1	
	H2	K1KA10AA0715	10P CONNECTOR	1	
	H3	K1KA09AA0714	9P CONNECTOR	1	
	H4	K1KA04AA0714	4P CONNECTOR	1	
	IC3301	TVRP844	IC	1	
	IC3303	C0JBAZ002269	IC	1	
	IC3307	C1AB00002848	IC	1	
	IC3308	C0DBFFD00003	IC	1	
	IC3310	TVRP845	IC	1	
	IC3312	C0EBE0000066	IC	1	
	IC3314	TVRP843	IC	1	
	IC3319	TVRP842	IC	1	
	IC3320	C0JBAZ002269	IC	1	

Safety	Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
	IC3341	C1ZBZ0003463	IC	1	
	IC3342	C0DBEHG00006	IC	1	
	IC3343	C0ZBZ0001561	IC	1	
	IC3345	C0DBAYY00183	IC	1	
	IC3346	C0ZBZ0001568	IC	1	
	JK3301	K1FB124B0025	CONNECTOR	1	
	JK3302	K2HC103B0105	JACK	1	
	L3310	J0JHC0000034	CHIP INDUCTOR	1	
	L3311	J0JHC0000075	CHIP INDUCTOR	1	
	L3312	J0JHC0000034	CHIP INDUCTOR	1	
	L3314	J0JHC0000034	CHIP INDUCTOR	1	
	L3322	J0JHC0000075	CHIP INDUCTOR	1	
	L3325-27	J0JHC0000075	CHIP INDUCTOR	3	
	L3328	J0JHC0000034	CHIP INDUCTOR	1	
	L3329	J0JHC0000075	CHIP INDUCTOR	1	
	L3343,44	J0JHC0000075	CHIP INDUCTOR	2	
	L3357,58	J0JHC0000075	CHIP INDUCTOR	2	
	L3360	G1C330MA0363	INDUCTION COIL	1	
	L3361-64	J0JHC0000034	CHIP INDUCTOR	4	
	L3366,67	EXC3BB221H	BEAD CHOKE	2	
	L3368,69	J0JHC0000034	CHIP INDUCTOR	2	
	L3370	J0JHC0000075	CHIP INDUCTOR	1	
	PA3301	K5H4022A0023	FUSE	1	
	Q3301-04	2SD0601ASL	TRANSISTOR	4	
	Q3305	2SK1228	FET	1	
	R3022	D0GB103JA057	M 10K OHM J 1/ 16W	1	
	R3023,24	ERJ3GEYJ472	M 4.7KOHM,J,1/ 16W	2	
	R3025,26	ERJ3GEYJ560	M 56 OHM,J,1/16W	2	
	R3345,46	ERJ3GEYJ330	M 33 OHM,J,1/16W	2	
	R3349,50	D0GB103JA057	M 10K OHM J 1/ 16W	2	
	R3356,57	ERJ3GEYJ330	M 33 OHM,J,1/16W	2	
	R3364,65	ERJ3GEYJ472	M 4.7KOHM,J,1/ 16W	2	
	R3374	D0GB103JA057	M 10K OHM J 1/ 16W	1	
	R3377	D0GB103JA057	M 10K OHM J 1/ 16W	1	
	R3380,81	ERJ3GEYJ220	M 22 OHM,J,1/16W	2	
	R3394	D0GB182JA057	M 1.8KOHM J 1/ 16W	1	
	R3398	ERJ3GEYJ472	M 4.7KOHM,J,1/ 16W	1	
	R3399	ERJ3GEYJ220	M 22 OHM,J,1/16W	1	
	R3400	D0GB103JA057	M 10K OHM J 1/ 16W	1	
	R3401	ERJ3GEYJ100	M 10 OHM,J,1/16W	1	
	R3402	D0GB104JA041	M 100KOHM J 1/ 16W	1	
	R3403	ERJ3GEYJ273	M 27KOHM,J,1/16W	1	
	R3404	ERJ3GEYJ100	M 10 OHM,J,1/16W	1	
	R3406,07	EXB2HV820JV	RESISTOR ARRAY	2	
	R3408	ERJ3GEYJ100	M 10 OHM,J,1/16W	1	
	R3410,11	EXB2HV820JV	RESISTOR ARRAY	2	
	R3412	D1BB2612A055	M26.1KOHM, 1/10W	1	
	R3413	ERJ3GEY0R00	M 0 OHM, 1/16W	1	
	R3415	D1BB1002A055	M 10KOHM, 1/10W	1	
	R3417	EXB2HV820JV	RESISTOR ARRAY	1	
	R3418	ERJ3GEYJ820	M 82 OHM,J,1/16W	1	
	R3420	ERJ3GEYJ4R7	M 4.7HM,J,1/16W	1	
	R3421	D0GDR00Z0002	M 0 OHM, 1/10W	1	
	R3422	ERJ3GEYJ820	M 82 OHM,J,1/16W	1	
	R3423-26	EXB2HV820JV	RESISTOR ARRAY	4	
	R3427,28	ERJ3GEYJ820	M 82 OHM,J,1/16W	2	
	R3429	ERJ3GEYJ560	M 56 OHM,J,1/16W	1	
	R3430,31	D0GB103JA057	M 10K OHM J 1/ 16W	2	

Safety	Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
	R3433	D0GB103JA057	M 10K OHM J 1/ 16W	1	
	R3435	D0GB184JA057	M 180KOHM J 1/ 16W	1	
	R3436	ERJ3GEYJ101	M 100 OHM,J,1/ 16W	1	
	R3437	ERJ3GEYD153V	M 15KOHM,J,1/16W	1	
	R3438	ERJ3EKF2002	M 20KOHM, 1/16W	1	
	R3439	ERJ3EKF3302	M 33KOHM, 1/16W	1	
	R3440	ERJ3GEYJ333	M 33KOHM,J,1/16W	1	
	R3441,42	ERJ3GEYJ101	M 100 OHM,J,1/ 16W	2	
	R3443	D0GB102JA057	M 1KOHM,J,1/16W	1	
	R3444	ERJ3GEYJ101	M 100 OHM,J,1/ 16W	1	
	R3445	D0GB184JA057	M 180KOHM J 1/ 16W	1	
	R3446	ERJ3GEYJ101	M 100 OHM,J,1/ 16W	1	
	R3447	ERJ3GEYD153V	M 15KOHM,J,1/16W	1	
	R3448,49	D0GB473JA057	M 47KOHM,J,1/16W	2	
	R3450	ERJ3GEYJ101	M 100 OHM,J,1/ 16W	1	
	R3451	ERJ3GEYJ330	M 33 OHM,J,1/16W	1	
	R3452	D0GB102JA057	M 1KOHM,J,1/16W	1	
	R3453	ERJ3GEYJ821	M820 OHM,J,1/16W	1	
	R3454	D0GB103JA057	M 10K OHM J 1/ 16W	1	
	R3455	ERJ3GEYJ333	M 33KOHM,J,1/16W	1	
	R3456	ERJ3GEYJ101	M 100 OHM,J,1/ 16W	1	
	R3457	D0GB102JA057	M 1KOHM,J,1/16W	1	
	R3458	D0GB103JA057	M 10K OHM J 1/ 16W	1	
	R3459,60	ERJ3GEYJ101	M 100 OHM,J,1/ 16W	2	
	R3461,62	D0GB103JA057	M 10K OHM J 1/ 16W	2	
	R3463	ERJ3GEYJ390	M 39 OHM,J,1/16W	1	
	R3464-67	ERJ3GEYJ220	M 22 OHM,J,1/16W	4	
	R3469	D0GB103JA057	M 10K OHM J 1/ 16W	1	
	R3470	ERJ3GEYJ220	M 22 OHM,J,1/16W	1	
	R3471,72	D0GB102JA057	M 1KOHM,J,1/16W	2	
	R3473	ERJ3GEYJ471	M 470 OHM,J,1/ 16W	1	
	R3474,75	D0GB103JA057	M 10K OHM J 1/ 16W	2	
	R3476,77	ERJ3GEY0R00	M 0 OHM, 1/16W	2	
	R3478	ERJ3GEYJ470	M 47 OHM,J,1/16W	1	
	R3479	D0GB473JA057	M 47KOHM,J,1/16W	1	
	R3481,82	D0GB103JA057	M 10K OHM J 1/ 16W	2	
	R3483	ERJ3GEYJ330	M 33 OHM,J,1/16W	1	
	R3484-90	D0GB103JA057	M 10K OHM J 1/ 16W	7	
	R3491	ERJ3GEYJ820	M 82 OHM,J,1/16W	1	
	R3492	ERJ3GEYJ220	M 22 OHM,J,1/16W	1	
	R3493-95	D0GB103JA057	M 10K OHM J 1/ 16W	3	
	R3496	ERJ3GEYJ220	M 22 OHM,J,1/16W	1	
	R3499,00	ERJ3GEYJ220	M 22 OHM,J,1/16W	2	
	R3501	ERJ3GEYJ101	M 100 OHM,J,1/ 16W	1	
	R3502	ERJ3GEY0R00	M 0 OHM, 1/16W	1	
	R3503	D0GB473JA057	M 47KOHM,J,1/16W	1	
	R3504	D0GB103JA057	M 10K OHM J 1/ 16W	1	
	R3505-09	D0GB473JA057	M 47KOHM,J,1/16W	5	
	R3510	ERJ3GEYJ472	M 4.7KOHM,J,1/ 16W	1	
	R3511	D0GB473JA057	M 47KOHM,J,1/16W	1	
	R3512	ERJ3GEYJ472	M 4.7KOHM,J,1/ 16W	1	
	R3515	D0GB103JA057	M 10K OHM J 1/ 16W	1	
	R3517	ERJ3GEYJ470	M 47 OHM,J,1/16W	1	
	R3518	D0GB102JA057	M 1KOHM,J,1/16W	1	

Safety	Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
	R3519	D0GB103JA057	M 10K OHM J 1/16W	1	
	R3521	D0GB102JA057	M 1KOHM,J,1/16W	1	
	R3540	D0GB473JA057	M 47KOHM,J,1/16W	1	
	R3542,43	ERJ3GEYJ330	M 33 OHM,J,1/16W	2	
	R3544,45	ERJ3GEYJ472	M 4.7KOHM,J,1/16W	2	
	R3546	ERJ3GEYJ101	M 100 OHM,J,1/16W	1	
	R3547,48	ERJ3GEYJ330	M 33 OHM,J,1/16W	2	
	R3549	D0GB103JA057	M 10K OHM J 1/16W	1	
	R3550,51	ERJ3GEYJ220	M 22 OHM,J,1/16W	2	
	R3552,53	D0GB103JA057	M 10K OHM J 1/16W	2	
	R3571-73	D0GB473JA057	M 47KOHM,J,1/16W	3	
	R3577	ERJ3GEYJ332	M 3.3KOHM,J,1/16W	1	
	R3578	ERJ3GEY0R00	M 0 OHM, 1/16W	1	
	R3641	D0GB103JA057	M 10K OHM J 1/16W	1	
	R3644	D0GB103JA057	M 10K OHM J 1/16W	1	
	R3646,47	D0GB102JA057	M 1KOHM,J,1/16W	2	
	R3649,50	ERJ3GEYJ470	M 47 OHM,J,1/16W	2	
	R3651	ERJ3GEYJ100	M 10 OHM,J,1/16W	1	
	R3653	ERJ3GEY0R00	M 0 OHM, 1/16W	1	
		TXNHDE10UNT	HDE PWB BLOCK ASSY	1	
	X3301	H1A2705B0032	CRYSTAL	1	
	X3302	H0J100500030	CRYSTAL	1	